ABSTRACT OF THE DISCLOSURE

There is provided a leakage determination system for an evaporative fuel processing system, which, even when pressure within the evaporative fuel processing system is temporarily increased e.g. due to an increase in the amount of generation of evaporative fuel in a fuel tank, is capable of performing an accurate leakage determination by eliminating the influence of the temporary rise in the pressure within the evaporative fuel processing system on the leakage determination. A pressure sensor detects pressure within the evaporative fuel processing system. Negative pressure is introduced from the intake system into the evaporative fuel processing system, whereby the pressure within the evaporative fuel processing system is reduced until the detected pressure becomes equal to a predetermined negative pressure. After the pressure reduction, the negative pressure is introduced from the intake system into the evaporative fuel processing system under predetermined conditions. Whether or not there is a leak in the evaporative fuel processing system is determined based on a state of the pressure within the evaporative fuel processing system, which has been detected during the introduction of the negative pressure from the intake system.